

Modified Activated Carbon

U N I V E R S I T Y O F U T A H

CENTER

The Center for Modified and Activated Carbons Technology (MAC) focuses on modifications to existing activated carbon products and expanding into new products. Through chemical or biological modifications, activated carbon is modified at the molecular or surface level to enhance its sorption properties for treatment and purification of water or other liquids.

TECHNOLOGY

MAC's technology is centered around modified activated carbon which provides faster sorption, longer life, higher loading capacity, and better contamination removal for less cost than typical technologies. Compared with water treatment technologies such as reverse osmosis or activated alumina, modified activated carbon has a smaller treatment time, can operate over a larger pH range, is less expensive, and is able to remove more arsenic.

MAC's technology has applications such as mining, and water treatment in a broad range of industries including chemical plants, refineries, agriculture, medical, food and beverage, and analysis.

In its first year, the Center tested the use of the carbons in arsenic removal as well as zinc, cadmium, and copper removal. A number of metal binding proteins were also successfully tested with activated carbons.

ACCOMPLISHMENTS

MAC has already spun out a new company, INOTEC, with four products that it is marketing. Discussions are underway with major mining companies and prototype materials for arsenic removal are being tested. Pre-prototype materials and services have been requested by five different mining companies who are now customers of INOTEC. In addition, pilot-scale testing of MAC materials for removal of arsenic from drinking water is scheduled for New Mexico and is pending approval in Park City.

The Center received \$465,349 in funding and has two patent applications filed.

THINK TANK

What if there was...



A material that could completely remove contaminants from water in just a couple of hours for a tenth of the cost that current treatments require?

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